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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,646	01/10/2002	Vikas Krishna	ARC920010031US1	8578

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EXAMINER	
PHAM, HUNG Q	

ART UNIT	PAPER NUMBER
2172	

DATE MAILED: 06/17/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

PHQ

Office Action Summary	Application No.	Applicant(s)	
	10/044,646	KRISHNA ET AL.	
	Examiner	Art Unit	
	HUNG Q PHAM	2172	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 01/10/2002 was filed after the mailing date of the first Office Action. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

2. As disclosed in the specification on page 4, lines 7-8, the flow diagram 200 illustrates the bridging application according to prior art. Thus, Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 3, 4, 11, 13, 14 and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. As in claims 1, 11 and 19 the step of ***searching at least one problem identifier for entries ...***; ***searching one or more work histories for a given problem identifier...***; ***appending a predetermined identifier in the work history field***, in claims 3, 13, the step of ***sending one or more results with work histories which are greater than the sequence number in the work identifier field***, in claims 4, 14, the step of ***searching for a problem identifier in the problem identifier field for a predetermined value***, were not described in the specification.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 7, 11, 17 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As recited in claims 1, 11 and 19, ***one or more sequence numbers that are greater than a sequence number in the work identifier in one or more work history records*** are searched in the step of ***searching***, and ***the sequence number in the work identifier*** is incremented in the step of ***incrementing***. As seen, there are at least two kinds of sequence number in the claim, the sequence number returned from the search, and the sequence number in the work identifier in one or more history records. And the step of incrementing does not specify which sequence number, returned sequence number or sequence number in the work identifier in one or more work history records, will be increased by one.

As recited in claims 7 and 17, ***a sequence umber that is greater than a sequence number in the work identifier in work history field with the predetermined entry*** is search, and ***the number in the work identifier field*** is incremented. As seen, there are at least two kinds of sequence number in the claim, the sequence number returned from the search, and the sequence number in the work identifier in one or more history records. And the step of incrementing does not specify which sequence number, returned sequence number or sequence number in the work identifier in one or more work history records with the determined entry, will be increased by one.

Claim Rejections - 35 USC § 103

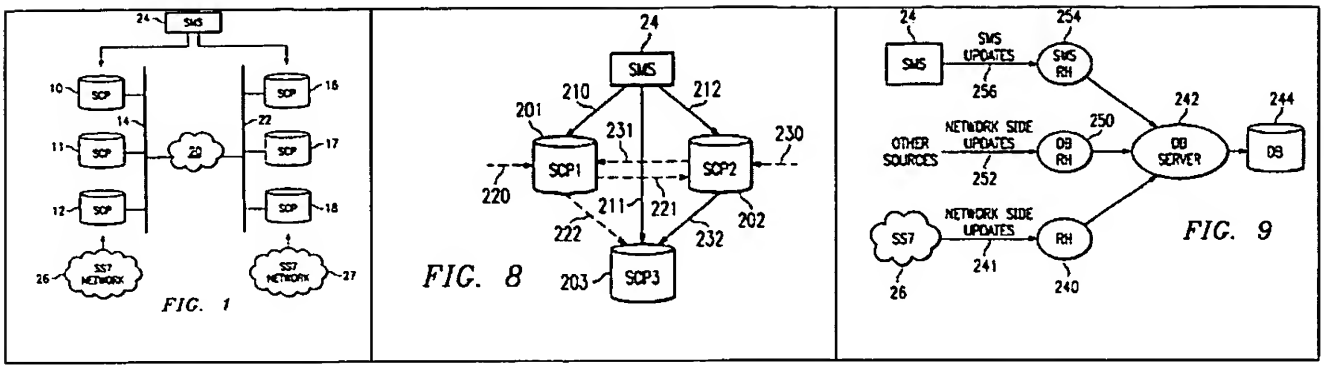
7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-5, 7-15 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guturu et al. [USP 6,581,075 B1].

Regarding to claims 1, 11 and 19, Guturu teaches a method of maintaining synchronization among multiple databases. As shown in FIG. 1 is a plurality of Service Control Point or SCPs, which are interconnected by a local area network or a wide area network (Col. 3, Lines 42-52).



As shown in FIG. 8, network updates or a network side updates are performed at a particular SCP, for example SCP1 201, and then propagated to all other SCPs via paths 221 and 222 or 231 and 232 (Col. 3, Lines 55-67). As seen, SCP1 201 is ***a first database server networked to*** other SCPs as ***at least one other database server.*** As shown in FIG. 9, a request handler, originated at the local SCP, receives network side updates from the SS7 or SMS, and instructs database server 242 to modify the data in database 244, such as adding a customer with a particular set of services. By using the key or index value in the request, the database is searched to determine whether a record exists with the same index value. The existing data record is read from the database into a temporary buffer and the change in data is made to data in the buffer. The timestamp, version number, SCP identifier are then updated in the buffered data to reflect that of the update request. The data record in the buffer is then used to replace or update the data record in the database. The data record is then propagated to or replicated at other SCP nodes in the network (Col. 4, Lines 1-25). As seen, the buffered records as ***collaborative database information records*** include keys as ***problem identifiers***, version numbers as ***work identifiers***, and the changes of data corresponding to timestamps as ***work histories***, the SCP identifier is used to ***select*** a SCP as ***remote***

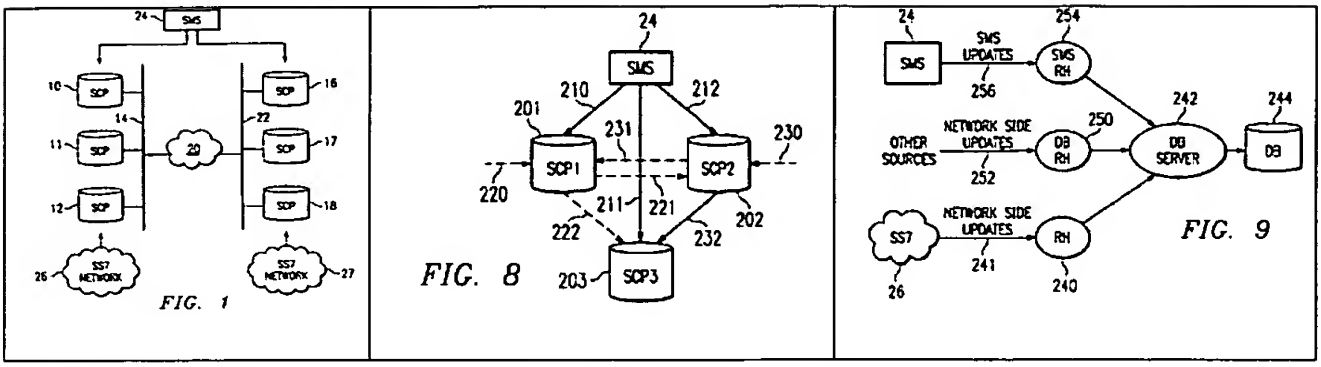
database server for updating. The key is used to search for records with data corresponding to timestamp in order to make the record determined by the key consistent within the networked SCP. In other words, the technique as discussed indicates the steps of ***searching at least one problem identifier for entries to be reconciled with the at least one selected remote database server***; ***searching one or more work histories for a given problem identifier to be reconciled with the at least one selected remote database server for a predetermined entry***. Guturu further discloses the step of ***sending at least one result to the at least one remote database server***; ***appending a predetermined identifier in the work history field***; and ***incrementing the sequence number in the work identifier*** (Col. 5, Lines 12-25). Guturu does not explicitly teach the step of ***searching for one or more sequence numbers that are greater than a sequence number in the work identifier in one or more work history records with the predetermined entry*** in order to perform the step of sending the result, appending a predetermined identifier and incrementing the sequence number. However, as disclosed by Guturu, the database is searched based on a key or index value to determine whether a record exists (Col. 4, Lines 15-18). If the update is a replacement, then the existing record is copied as the updated record. The updated record is further prepared by incrementing its version number. Thereafter, the existing record is replaced by the updated record and the updated record is replicated for propagation (Col. 5, Lines 11-25). As seen, the version number in a record as ***sequence number*** is returned based on the key or index search is the latest version, and obviously, this version number is higher than the previous version as ***a sequence number in the work identifier in one or more work history records with the predetermined entry*** based on the key

or index value. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Guturu method by including the technique of searching the latest version of a record in order to maintain the synchronization among multiple databases.

Regarding to claims 2 and 12, Guturu teaches all the claim subject matters as discussed in claims 1 and 11, Guturu further discloses the step of ***searching for a predetermined entry which does not include a time entry*** (FIG. 2, INSERTION).

Regarding to claims 3 and 13, Guturu teaches all the claim subject matters as discussed in claims 2 and 12, Guturu further discloses the step of ***sending one or more results with work histories which are greater than the sequence number in the work identifier field*** (Col. 4, Lines 1-25).

Regarding to claims 4 and 14, Guturu teaches a method of maintaining synchronization among multiple databases. As shown in FIG. 1 is a plurality of Service Control Point or SCPs, which are interconnected by a local area network or a wide area network (Col. 3, Lines 42-52).



As shown in FIG. 8, network updates or a network side updates are performed at a particular SCP, for example SCP1 201, and then propagated to all other SCPs via paths 221 and 222 or 231 and 232 (Col. 3, Lines 55-67). As seen, SCP1 201 is ***a first database server networked to*** other SCPs as ***at least one other database server***. As shown in FIG. 9, a request handler, originated at the local SCP, receives network side updates from the SS7 or SMS, and instructs database server 242 to modify the data in database 244, such as adding a customer with a particular set of services. By using the key or index value in the request, the database is searched to determine whether a record exists with the same index value. The existing data record is read from the database into a temporary buffer and the change in data is made to data in the buffer. The timestamp, version number, SCP identifier are then updated in the buffered data to reflect that of the update request. The data record in the buffer is then used to replace or update the data record in the database. The data record is then propagated to or replicated at other SCP nodes in the network (Col. 4, Lines 1-25). As seen, the buffered records as ***collaborative database information*** include key in the key field as ***problem identifier field***, version number in version field as ***work identifier field***, and the change of data corresponding to timestamp in the data field as ***work history field***. As shown in FIG. 4,

block 92 is the step of ***searching for a problem identifier in the problem identifier field*** by using a key or index value as ***a predetermined value***, and ***if the problem identifier is found then incrementing*** the version number as ***a counter in a work identifier field for a database record being*** propagated or ***appended*** at block 108, ***information*** is updated or ***appended into the*** corresponding field of the record as ***work history for the record*** at block 146 FIG. 5B. ***If the*** key or ***problem identifier is not found then*** version number as ***counter value is initialized*** to 1 in the version field as ***work identifier field***, and data as ***work history information*** is ***entered into*** the corresponding data field as ***work history field*** at block 100 of FIG. 4. Guturu does not explicitly teach the step of ***assigning a unique problem identifier in a problem identifier field*** if the key as problem identifier is not found. However, at block 102 of FIG. 4, the record is inserted to the database after block 100, and obviously, a key or index value ***a unique problem identifier in a problem identifier field*** has to be assigned to the record for later processing. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Guturu method by including the step of assigning a key to a record in order to manipulate the database record.

Regarding to claims 5 and 15, Guturu teaches all the claim subject matters as discussed in claims 4 and 14, Guturu further discloses the step of ***appending the information into the work history further includes information without the use of a time stamp*** (FIG. 2, INSERTION).

Regarding to claims 7 and 17, Guturu teaches all the claim subject matters as discussed in claims 4 and 14, Guturu further discloses the steps of ***searching the work history field for a given problem identifier to be reconciled with the at least one remote database server for a predetermined entry; searching for a sequence number that is greater than a sequence number in the work identifier in work history field with the predetermined entry; sending at least one result from the searching for a sequence number to the at least one remote database server; appending a predetermined identifier for each of the results sent in the work history field; and incrementing the number in the work identifier field*** as discussed in claims 1 and 11.

Regarding to claims 8, 9 and 18, Guturu teaches all the claim subject matters as discussed in claims 7 and 17, but does not explicitly teach the step of ***sending a result to the at least one remote database server with a database schema that is different than a database schema for the first database server.*** However, a database schema of a database server could be preserved if the change is for a particular field of a record corresponding to the search key or index value. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Guturu method by using the method in different schema of the database server in order to maintain synchronization among multiple databases.

Regarding to claim 10, Guturu teaches all the claim subject matters as discussed in claim 7, but does not explicitly teach the step of ***sending at least one result from a***

database schema that have been previously designated as non-confidential. However, in order to secure the confidential data, only non-confidential data should be disclosed to public. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Guturu method by including the step of designating a database schema as non-confidential for updating and transferring between databases in order to protect the transferring information.

9. Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guturu et al. [USP 6,581,075 B1] in view of Applicant Admitted Prior Art [Background].

Regarding to claims 6 and 16, Guturu teaches all the claim subject matters as discussed in claims 4 and 14, but fails to disclose the step of ***searching for a problem identifier as part of a help desk application***. In the background is the disclosure of a help desk application problem. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Guturu method by using the technique as discussed above applies to a help desk problem in order to maintain synchronization among multiple databases.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q PHAM whose telephone number is 703-605-4242. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner Hung Pham
June 4, 2004